

REMARKS

Applicant understands the prior rejections of Claims 1-20 based on Schmidt (U.S. Patent No. 6,842,803) in view of Chisholm (U.S. Patent No. 5,968,143) are withdrawn. Claims 1-20 stand newly rejected under 35 USC Section 103 by a new reference, Wood et al., (US Patent No. 6,915,363). Reconsideration of this Application is respectfully requested. Independent Claims 1, 9, and 14 have been amended. Claims 1 through 20 remain pending. Applicant asserts that the claims of the present application are patentable over the cited art.

Drawing objections

Paragraph 3 of the above referenced office action states that figure 1 of the present specification is objected to because "only that which is oldest illustrated". Applicant respectfully disagrees with this characterization of figure 1. Specifically, Applicant points out that, for example, the disk controller 107 of figure 1 is recited as performing the novel disk I/O method as recited in the claims of the present application. As such, the disk controller 107 is not prior art.

35 USC Section 103 rejections

Paragraphs 4 and 5 of the above referenced Office Action reject independent Claims 1, 9, and 14 as being obvious in view of Wood (US Patent No. 6,915,363) in further view of Applicant admitted prior art. Applicant respectfully traverses.

Independent Claims 1, 9, and 14 have been amended to recite upon receiving a request for a disk I/O from an application executing on the computer system, transferring a command from the processor to the disk controller, the command causing a start up of a disk drive coupled to the disk controller, and then, subsequent to transferring the command causing the start up, preparing disk transaction information by packaging a plurality of data structures comprising the disk transaction (emphasis added). Applicant points out that the independent claims have been amended to explicitly recite that receiving a request for disk I/O from an application executing on the computer system causes the transmission of the startup command. The transferring of the command to the disk controller that causes the start up of the disk drive, and that the packaging of the data structures comprising the disk transaction occurs after the start up command has been transferred. The disk controller then processes the disk transaction information to control the disk drive and implement a disk I/O. By causing the start up prior to the packaging, claimed embodiments (e.g., dependent Claims 6, 12, and 18)

enable the disk controller to hide the start up latency of the disk drive
(emphasis added).

Thus, each of the independent Claims 1, 9, and 14 recite transferring a command to a disk controller, wherein the command causes a start up of a disk drive coupled to the disk controller. The transferring occurs upon receiving a request for a disk I/O from an application executing on the computer system. Subsequent to this command transfer, disk transaction information is then prepared and processed by the disk controller to control the disk drive and implement a disk I/O, thereby enabling the disk controller to hide the start up latency of the disk drive. While the disk drive executes its start up routine (e.g., which can take 4 to 6 microseconds), the disk controller packages this transaction.

With regard to the Wood reference, Applicant maintains that Wood is directed towards a general computer system data storage device array that includes a number of data storage devices, each operable to spin-up its spindle motor in response to the successful communication of predetermined out-of-band (OOB) signal. By selectively causing the communication of the predetermined OOB signals to the data storage devices, the selective spin-up of the data storage devices may be achieved.

There is no further discussion of, upon receiving a request for a disk I/O from an application executing on the computer system, the transmission of any disk start up commands, disk transaction information, the plurality of PRD (physical region descriptor) data structures, or the plurality of CPB (command parameter block) data structures for implementing the disk transaction. There is no disclosure or suggestion with regard to, subsequent to transferring the command causing the start up, preparing disk transaction information by packaging a plurality of data structures comprising the disk transaction (emphasis added).

With regard to the alleged AAPA, Applicant maintains that there is no disclosure or suggestion in AAPA with regard to, subsequent to transferring the command causing the start up, preparing disk transaction information by packaging a plurality of data structures comprising the disk transaction as in the claimed invention, or upon receiving a request for a disk I/O from an application executing on the computer system, the transmission of any disk start up commands (emphasis added).

Accordingly, Applicant asserts that Wood in combination with any alleged AAPA does not show or suggest the claimed invention. Thus, independent Claims 1, 9, and 14 are not obvious in view of the Wood-AAPA combination within the meaning of 35 USC Section 103.

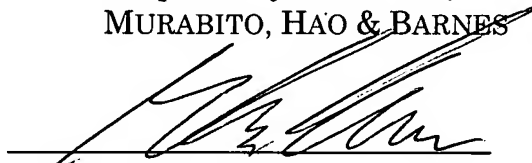
CONCLUSION

Applicant respectfully asserts that all claims (Claims 1-20) are now in condition for allowance and Applicant earnestly solicits such action from the Examiner. The Examiner is urged to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

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Respectfully submitted,
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